

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION

DRAM TECHNOLOGIES LLC

v.

Civil Action No. 2:10-cv-45

AMERICA II GROUP, INC. d/b/a  
AMERICA II CORP.;  
AMERICA II ELECTRONICS, INC.;  
D-MAC INTERNATIONAL, INC.;  
EDX ELECTRONICS, INC.;  
ELITE SEMICONDUCTOR MEMORY  
TECHNOLOGY INC.;  
ETRON TECHNOLOGY AMERICA, INC.;  
ETRON TECHNOLOGY, INC.;  
FIDELIX CO., LTD.;  
HYNIX SEMICONDUCTOR AMERICA, INC.;  
HYNIX SEMICONDUCTOR  
MANUFACTURING AMERICA, INC.;  
HYNIX SEMICONDUCTOR, INC.;  
INTEGRATED SILICON SOLUTION, INC.;  
MEMPHIS ELECTRONIC AG;  
MEMPHIS ELECTRONIC, INC.;  
ODYSSEY ELECTRONICS, LTD.;  
RAVIN ELECTRONICS LLC;  
TECH RECOVERY LLC d/b/a  
TXCESS SURPLUS;  
TRU-TRONICS, INC. d/b/a TRU-TRONICS  
INT'L;  
X-PRESS MICRO, INC.; and  
XITRADE INC. D/B/A MEMORYDEPOT.COM

JURY TRIAL DEMANDED

**ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT**

This is an action for patent infringement in which DRAM Technologies LLC submits this Complaint against America II Group, Inc. d/b/a America II Corp.; America II Electronics, Inc.; D-Mac International, Inc.; EDX Electronics, Inc.; Elite Semiconductor Memory Technology Inc.; Etron Technology America, Inc.; Etron Technology, Inc.; Fidelix Co., Ltd.; Hynix

Semiconductor America, Inc.; Hynix Semiconductor Manufacturing America, Inc.; Hynix Semiconductor, Inc.; Integrated Silicon Solution, Inc.; Memphis Electronic AG; Memphis Electronic, Inc.; Odyssey Electronics, Ltd.; Ravin Electronics LLC; Tech Recovery LLC d/b/a Txcass Surplus; Tru-Tronics, Inc. d/b/a Tru-Tronics Int'l; X-Press Micro, Inc.; and Xitrade Inc. d/b/a MemoryDepot.com (collectively “Defendants”).

### **PARTIES**

1. DRAM Technologies LLC (“DRAM Technologies” or “Plaintiff”) is a Texas limited liability company with a place of business at 6136 Frisco Square Blvd., 4th Floor, Frisco, Texas 75034.

2. On information and belief, America II Group, Inc. d/b/a America II Corp. (“America II Corp.”) is Florida corporation with a place of business at 2500 118th Avenue North, St. Petersburg, Florida 33716.

3. On information and belief, America II Electronics, Inc. (“America II Electronics”) is Florida corporation with a place of business at 2500 118th Avenue North, St. Petersburg, Florida 33716. America II Corp. and America II Electronics are referred to collectively as “America II.”

4. On information and belief, D-Mac International, Inc. (“D-Mac”) is Florida corporation with a place of business at 10575 US 98 South, Sebring, Florida 33876.

5. On information and belief, EDX Electronics, Inc. (“EDX”) is Florida corporation with a place of business at 1040 Willa Springs Drive, Winter Springs, Florida 32708.

6. On information and belief, Elite Semiconductor Memory Technology Inc. (“ESMT”) is an entity organized under the laws of Taiwan with a place of business at No. 23, Industry E. Road IV Science-Based Industrial Park, Hsinchu 300, Taiwan, R.O.C.

7. On information and belief, Etron Technology America, Inc. (“Etron America”) is a California corporation with a place of business at 3375 Scott Blvd. Suite 128, Santa Clara, California 95054.

8. On information and belief, Etron Technology, Inc. (“Etron Taiwan”) is an entity organized under the laws of Taiwan with a place of business at No. 6 Technology Rd. 5, Science-Based Industrial Park, Hsinchu, 30078, Taiwan, R.O.C. Etron America and Etron Taiwan are referred to collectively as “Etron.”

9. On information and belief, Fidelix Co., Ltd. (“Fidelix”) is an entity organized under the laws of a Korea with a place of business at 2F, SC First Bank Building, 6-8, Sunae-dong, Bundang-gu, Sungnam-si, Kyonggi-do, 463-825, Korea.

10. On information and belief, Hynix Semiconductor America, Inc. (“Hynix America”) is a California corporation with a place of business at 3101 North First Street, San Jose, California 95134.

11. On information and belief, Hynix Semiconductor Manufacturing America, Inc. (“Hynix Manufacturing”) is a California corporation with a place of business at 1830 Willow Creek Circle, Eugene, Oregon 97402.

12. On information and belief, Hynix Semiconductor, Inc. (“Hynix Korea”) is an entity organized under the laws of a Korea with a place of business at San 136-1, Ami-Ri Bubal-eub Ichon-si Kyongki-do, South Korea 467-860. Hynix America, Hynix Manufacturing and Hynix Korea are referred to collectively as “Hynix.”

13. On information and belief, Integrated Silicon Solution, Inc. (“ISSI”) is a Delaware corporation with a place of business at 1940 Zanker Road, San Jose, CA 95112-4216.

14. On information and belief, Memphis Electronic AG. (“Memphis AG”) is an entity organized under the laws of Germany with a place of business at Saalburgstr. 155, D-61350 Bad Homburg v.d.H., Germany.

15. On information and belief, Memphis Electronic, Inc. (“Memphis Texas”) is a Texas corporation with a place of business at 1800 West Loop South, Suite 1690, Houston, Texas 77027-3235. Memphis AG, and Memphis Texas are referred to collectively as “Memphis.”

16. On information and belief, Odyssey Electronics, Ltd. (“Odyssey”) is a New Hampshire corporation with a place of business at 659 Chandler Street, Tewksbury, Massachusetts 01876.

17. On information and belief, Ravin Electronics LLC (“Ravin Electronics”) is a New York limited liability company with a place of business at 90-11 Colin Drive, Holbrook, New York, 11741.

18. On information and belief, Tech Recovery LLC d/b/a Txcass Surplus (“Txcass Surplus”) is a Texas limited liability company with place of business in Round Rock, Texas.

19. On information and belief, Tru-Tronics, Inc. d/b/a Tru-Tronics Int'l (“Tru-Tronics”) is a Nevada corporation with a place of business at 4040 East Lone Mountain Road, North Las Vegas, Nevada 89081-2765.

20. On information and belief, X-Press Micro, Inc. (“X-Press”) is a Texas corporation with a place of business at 1120 Toro Grande Drive, Suite 100, Cedar Park, Texas 78613.

21. On information and belief, XiTrade Inc. d/b/a MemoryDepot.com (“XiTrade”) is a corporation organized under the Canada Business Corporations Act with its principal place of

business at 7900 Taschereau West Suite C-205, Brossard, Quebec J4X1C2 Canada, and a place of business in the United States at 1320 Route 9, Champlain, New York 12929.

### **JURISDICTION AND VENUE**

22. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a). On information and belief, Defendants are subject to this Court's specific and general personal jurisdiction, pursuant to due process and/or the Texas Long Arm Statute, due at least to their substantial business in this forum, including at least a portion of the infringements alleged herein. On information and belief, within this district Defendants, directly and/or through intermediaries, have advertised (including through websites), offered to sell, sold and/or distributed infringing products, and/or have induced the sale and use of infringing products. Further, on information and belief, Defendants are subject to the Court's general jurisdiction, including from regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Texas.

23. Venue is proper in this district under 28 U.S.C. §§ 1391(b), 1391(c) and 1400(b). On information and belief, from and within this Judicial District each Defendant has committed at least a portion of the infringements at issue in this case. Without limitation, on information and belief, within this district Defendants, directly and/or through intermediaries, have advertised (including through websites), offered to sell, sold and/or distributed infringing products, and/or have induced the sale and use of infringing products.

**COUNT I**  
**INFRINGEMENT OF U.S. PATENT NO. 6,324,118**

24. United States Patent No. 6,324,118 (“the ‘118 patent”), entitled “Synchronous semiconductor memory device having improved operational frequency margin at data input/output,” issued on November 17, 2001.

25. DRAM Technologies is the present assignee of the entire right, title and interest in and to the ‘118 patent, including all rights to sue for past and present infringement. Accordingly, DRAM Technologies has standing to bring this lawsuit for infringement of the ‘118 patent.

26. The various claims of the ‘118 patent cover, inter alia, synchronous semiconductor memory devices, namely dynamic random access memory (hereinafter “DRAM”) chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

27. On information and belief, America II has been and now is infringing the ‘118 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

28. On information and belief, at least since receiving notice of the ‘118 patent, including at a minimum from this lawsuit, America II is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the ‘118 patent, including without limitation by selling and/or offering for sale said DRAM chips; and, further, America II is and/or has been inducing users to use said chips.

29. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, America II is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '118 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

30. Accordingly, on information and belief America II is liable for infringement of the '118 patent.

31. On information and belief, D-MAC has been and now is infringing the '118 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

32. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, D-MAC is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '118 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further D-MAC is and/or has been inducing users to use said chips.

33. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, D-MAC is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same

to be especially made or especially adapted for use in an infringement of the '118 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

34. Accordingly, on information and belief D-MAC is liable for infringement of the '118 patent.

35. On information and belief, EDX has been and now is infringing the '118 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

36. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, EDX is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '118 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further EDX is and/or has been inducing users to use said chips.

37. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, EDX is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '118 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

38. Accordingly, on information and belief EDX is liable for infringement of the '118 patent.



39. On information and belief, ESMT has been and now is infringing the '118 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

40. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, ESMT is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '118 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further ESMT is and/or has been inducing users to use said chips.

41. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, ESMT is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '118 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

42. Accordingly, on information and belief ESMT is liable for infringement of the '118 patent.

43. On information and belief, Etron has been and now is infringing the '118 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous

semiconductor memory devices, namely DRAM chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

44. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, Etron is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '118 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further Etron is and/or has been inducing users to use said chips.

45. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, Etron is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '118 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

46. Accordingly, on information and belief Etron is liable for infringement of the '118 patent.

47. On information and belief, Fidelix has been and now is infringing the '118 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data

with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

48. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, Fidelix is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '118 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further Fidelix is and/or has been inducing users to use said chips.

49. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, Fidelix is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '118 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

50. Accordingly, on information and belief Fidelix is liable for infringement of the '118 patent.

51. On information and belief, Hynix has been and now is infringing the '118 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

52. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, Hynix is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '118 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further Hynix is and/or has been inducing users to use said chips.

53. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, Hynix is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '118 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

54. Accordingly, on information and belief Hynix is liable for infringement of the '118 patent.

55. On information and belief, ISSI has been and now is infringing the '118 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

56. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, ISSI is and/or has been inducing others, including

without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '118 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further ISSI is and/or has been inducing users to use said chips.

57. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, ISSI is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '118 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

58. Accordingly, on information and belief ISSI is liable for infringement of the '118 patent.

59. On information and belief, Memphis has been and now is infringing the '118 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

60. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, Memphis is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to

infringe the '118 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Memphis is and/or has been inducing users to use said chips.

61. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, Memphis is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '118 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

62. Accordingly, on information and belief Memphis is liable for infringement of the '118 patent.

63. On information and belief, Odyssey has been and now is infringing the '118 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

64. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, Odyssey is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '118 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Odyssey is and/or has been inducing users to use said chips.

65. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, Odyssey is and/or has been contributing to the

infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '118 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

66. Accordingly, on information and belief Odyssey is liable for infringement of the '118 patent.

67. On information and belief, Ravin Electronics has been and now is infringing the '118 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

68. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, Ravin Electronics is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '118 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Ravin Electronics is and/or has been inducing users to use said chips.

69. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, Ravin Electronics is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '118

patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

70. Accordingly, on information and belief Ravin Electronics is liable for infringement of the '118 patent.

71. On information and belief, Tru-Tronics has been and now is infringing the '118 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

72. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, Tru-Tronics is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '118 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Tru-Tronics is and/or has been inducing users to use said chips.

73. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, Tru-Tronics is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '118 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

74. Accordingly, on information and belief Tru-Tronics is liable for infringement of the '118 patent.



75. On information and belief, X-Press has been and now is infringing the '118 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

76. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, X-Press is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '118 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further X-Press is and/or has been inducing users to use said chips.

77. On information and belief, at least since receiving notice of the '118 patent, including at a minimum from this lawsuit, X-Press is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '118 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

78. Accordingly, on information and belief X-Press is liable for infringement of the '118 patent.

79. On information and belief, XiTrade has been and now is infringing the '118 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising input/output terminals, input/output circuits including a plurality of data holding circuits, data buses exchanging data

with said input/output circuits, and internal circuits performing an operation of reading/storing data from/to the data bus.

80. On information and belief, at least since receiving notice of the ‘118 patent, including at a minimum from this lawsuit, XiTrade is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the ‘118 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further XiTrade is and/or has been inducing users to use said chips.

81. On information and belief, at least since receiving notice of the ‘118 patent, including at a minimum from this lawsuit, XiTrade is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the ‘118 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

82. Accordingly, on information and belief XiTrade is liable for infringement of the ‘118 patent.

**COUNT II**  
**INFRINGEMENT OF U.S. PATENT NO. 5,708,622**

83. United States Patent No. 5,708,622 (“the ‘622 patent”), entitled “Clock synchronous semiconductor memory device,” issued on January 13, 1998.

84. DRAM Technologies is the present assignee of the entire right, title and interest in and to the ‘622 patent, including all rights to sue for past and present infringement. Accordingly, DRAM Technologies has standing to bring this lawsuit for infringement of the ‘622 patent.

85. The various claims of the ‘622 patent cover, inter alia, synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a

plurality of memory cells, a first data register for temporarily holding data from the memory cells, a second data register receiving and storing data held by said first data register, detection means for detecting that said second data register is under a non-accessed state, and transfer means, responsive to said detection means, for conducting data transfer from said first data register to said second data register.

86. On information and belief, America II has been and now is infringing the '622 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a plurality of memory cells, a first data register for temporarily holding data from the memory cells, a second data register receiving and storing data held by said first data register, detection means for detecting that said second data register is under a non-accessed state, and transfer means, responsive to said detection means, for conducting data transfer from said first data register to said second data register.

87. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, America II is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '622 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further America II is and/or has been inducing users to use said chips.

88. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, America II is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same

to be especially made or especially adapted for use in an infringement of the '622 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

89. Accordingly, on information and belief America II is liable for infringement of the '622 patent.

90. On information and belief, D-Mac has been and now is infringing the '622 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a plurality of memory cells, a first data register for temporarily holding data from the memory cells, a second data register receiving and storing data held by said first data register, detection means for detecting that said second data register is under a non-accessed state, and transfer means, responsive to said detection means, for conducting data transfer from said first data register to said second data register.

91. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, D-Mac is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '622 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further D-Mac is and/or has been inducing users to use said chips.

92. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, D-Mac is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '622 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

93. Accordingly, on information and belief D-Mac is liable for infringement of the '622 patent.

94. On information and belief, EDX has been and now is infringing the '622 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a plurality of memory cells, a first data register for temporarily holding data from the memory cells, a second data register receiving and storing data held by said first data register, detection means for detecting that said second data register is under a non-accessed state, and transfer means, responsive to said detection means, for conducting data transfer from said first data register to said second data register.

95. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, EDX is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '622 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further EDX is and/or has been inducing users to use said chips.

96. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, EDX is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '622 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

97. Accordingly, on information and belief EDX is liable for infringement of the '622 patent.

98. On information and belief, ESMT has been and now is infringing the '622 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a plurality of memory cells, a first data register for temporarily holding data from the memory cells, a second data register receiving and storing data held by said first data register, detection means for detecting that said second data register is under a non-accessed state, and transfer means, responsive to said detection means, for conducting data transfer from said first data register to said second data register.

99. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, ESMT is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '622 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further ESMT is and/or has been inducing users to use said chips.

100. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, ESMT is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '622 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

101. Accordingly, on information and belief ESMT is liable for infringement of the '622 patent.

102. On information and belief, Etron has been and now is infringing the '622 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a plurality of memory cells, a first data register for temporarily holding data from the memory cells, a second data register receiving and storing data held by said first data register, detection means for detecting that said second data register is under a non-accessed state, and transfer means, responsive to said detection means, for conducting data transfer from said first data register to said second data register.

103. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, Etron is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '622 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further Etron is and/or has been inducing users to use said chips.

104. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, Etron is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '622 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

105. Accordingly, on information and belief Etron is liable for infringement of the '622 patent.

106. On information and belief, Fidelix has been and now is infringing the '622 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a plurality of memory cells, a first data register for temporarily holding data from the memory cells, a second data register receiving and storing data held by said first data register, detection means for detecting that said second data register is under a non-accessed state, and transfer means, responsive to said detection means, for conducting data transfer from said first data register to said second data register.

107. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, Fidelix is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '622 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further Fidelix is and/or has been inducing users to use said chips.

108. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, Fidelix is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '622 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

109. Accordingly, on information and belief Fidelix is liable for infringement of the '622 patent.



110. On information and belief, Hynix has been and now is infringing the '622 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a plurality of memory cells, a first data register for temporarily holding data from the memory cells, a second data register receiving and storing data held by said first data register, detection means for detecting that said second data register is under a non-accessed state, and transfer means, responsive to said detection means, for conducting data transfer from said first data register to said second data register.

111. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, Hynix is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '622 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further Hynix is and/or has been inducing users to use said chips.

112. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, Hynix is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '622 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

113. Accordingly, on information and belief Hynix is liable for infringement of the '622 patent.

114. On information and belief, ISSI has been and now is infringing the '622 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a plurality of memory cells, a first data register for temporarily holding data from the memory cells, a second data register receiving and storing data held by said first data register, detection means for detecting that said second data register is under a non-accessed state, and transfer means, responsive to said detection means, for conducting data transfer from said first data register to said second data register.

115. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, ISSI is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '622 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further ISSI is and/or has been inducing users to use said chips.

116. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, ISSI is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '622 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

117. Accordingly, on information and belief ISSI is liable for infringement of the '622 patent.

118. On information and belief, Memphis has been and now is infringing the '622 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a plurality of memory cells, a first data register for temporarily holding data from the memory cells, a second data register receiving and storing data held by said first data register, detection means for detecting that said second data register is under a non-accessed state, and transfer means, responsive to said detection means, for conducting data transfer from said first data register to said second data register.

119. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, Memphis is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '622 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Memphis is and/or has been inducing users to use said chips.

120. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, Memphis is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '622 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

121. Accordingly, on information and belief Memphis is liable for infringement of the '622 patent.

122. On information and belief, Odyssey has been and now is infringing the '622 patent by actions comprising selling, offering for sale and/or importing synchronous

semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a plurality of memory cells, a first data register for temporarily holding data from the memory cells, a second data register receiving and storing data held by said first data register, detection means for detecting that said second data register is under a non-accessed state, and transfer means, responsive to said detection means, for conducting data transfer from said first data register to said second data register.

123. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, Odyssey is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '622 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Odyssey is and/or has been inducing users to use said chips.

124. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, Odyssey is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '622 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

125. Accordingly, on information and belief Odyssey is liable for infringement of the '622 patent.

126. On information and belief, Ravin Electronics has been and now is infringing the '622 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a plurality of memory cells, a first data register for temporarily holding data from the memory

cells, a second data register receiving and storing data held by said first data register, detection means for detecting that said second data register is under a non-accessed state, and transfer means, responsive to said detection means, for conducting data transfer from said first data register to said second data register.

127. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, Ravin Electronics is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '622 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Ravin Electronics is and/or has been inducing users to use said chips.

128. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, Ravin Electronics is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '622 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

129. Accordingly, on information and belief Ravin Electronics is liable for infringement of the '622 patent.

130. On information and belief, Tru-Tronics has been and now is infringing the '622 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a plurality of memory cells, a first data register for temporarily holding data from the memory cells, a second data register receiving and storing data held by said first data register, detection

means for detecting that said second data register is under a non-accessed state, and transfer means, responsive to said detection means, for conducting data transfer from said first data register to said second data register.

131. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, Tru-Tronics is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '622 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Tru-Tronics is and/or has been inducing users to use said chips.

132. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, Tru-Tronics is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '622 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

133. Accordingly, on information and belief Tru-Tronics is liable for infringement of the '622 patent.

134. On information and belief, X-Press has been and now is infringing the '622 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a plurality of memory cells, a first data register for temporarily holding data from the memory cells, a second data register receiving and storing data held by said first data register, detection means for detecting that said second data register is under a non-accessed state, and transfer means,

responsive to said detection means, for conducting data transfer from said first data register to said second data register.

135. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, X-Press is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '622 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further X-Press is and/or has been inducing users to use said chips.

136. On information and belief, at least since receiving notice of the '622 patent, including at a minimum from this lawsuit, X-Press is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '622 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

137. Accordingly, on information and belief X-Press is liable for infringement of the '622 patent.

138. On information and belief, XiTrade has been and now is infringing the '622 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array having a plurality of memory cells, a first data register for temporarily holding data from the memory cells, a second data register receiving and storing data held by said first data register, detection means for detecting that said second data register is under a non-accessed state, and transfer means, responsive to said detection means, for conducting data transfer from said first data register to said second data register.

139. On information and belief, at least since receiving notice of the ‘622 patent, including at a minimum from this lawsuit, XiTrade is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the ‘622 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further XiTrade is and/or has been inducing users to use said chips.

140. On information and belief, at least since receiving notice of the ‘622 patent, including at a minimum from this lawsuit, XiTrade is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the ‘622 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

141. Accordingly, on information and belief XiTrade is liable for infringement of the ‘622 patent.

**COUNT III**  
**INFRINGEMENT OF U.S. PATENT NO. 5,959,925**

142. United States Patent No. 5,959,925 (“the ‘925 patent”), entitled “DRAM incorporating self refresh control circuit and system LSI including the DRAM,” issued on September 18, 1999.

143. DRAM Technologies is the present assignee of the entire right, title and interest in and to the ‘925 patent, including all rights to sue for past and present infringement. Accordingly, DRAM Technologies has standing to bring this lawsuit for infringement of the ‘925 patent.

144. The various claims of the ‘925 patent cover, inter alia, dynamic random access memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality of memory cells, and a self refresh address control section comprising a self refresh control



circuit for inputting a control signal and for outputting a self cycle signal, and a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

145. On information and belief, America II has been and now is infringing the '925 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality of memory cells, and a self refresh address control section comprising a self refresh control circuit for inputting a control signal and for outputting a self cycle signal, and a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

146. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, America II is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '925 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further America II is and/or has been inducing users to use said chips.

147. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, America II is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '925 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

148. Accordingly, on information and belief America II is liable for infringement of the '925 patent.

149. On information and belief, D-Mac has been and now is infringing the '925 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality of memory cells, and a self refresh address control section comprising a self refresh control circuit for inputting a control signal and for outputting a self cycle signal, and a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

150. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, D-Mac is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '925 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further D-Mac is and/or has been inducing users to use said chips.

151. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, D-Mac is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '925 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

152. Accordingly, on information and belief D-Mac is liable for infringement of the '925 patent.

153. On information and belief, EDX has been and now is infringing the '925 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality

of memory cells, and a self refresh address control section comprising a self refresh control circuit for inputting a control signal and for outputting a self cycle signal, and a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

154. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, EDX is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '925 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further EDX is and/or has been inducing users to use said chips.

155. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, EDX is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '925 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

156. Accordingly, on information and belief EDX is liable for infringement of the '925 patent.

157. On information and belief, ESMT has been and now is infringing the '925 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality of memory cells, and a self refresh address control section comprising a self refresh control circuit for inputting a control signal and for outputting a self cycle signal, and

a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

158. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, ESMT is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '925 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further ESMT is and/or has been inducing users to use said chips.

159. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, ESMT is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '925 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

160. Accordingly, on information and belief ESMT is liable for infringement of the '925 patent.

161. On information and belief, Etron has been and now is infringing the '925 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality of memory cells, and a self refresh address control section comprising a self refresh control circuit for inputting a control signal and for outputting a self cycle signal, and

a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

162. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, Etron is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '925 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further Etron is and/or has been inducing users to use said chips.

163. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, Etron is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '925 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

164. Accordingly, on information and belief Etron is liable for infringement of the '925 patent.

165. On information and belief, Fidelix has been and now is infringing the '925 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality of memory cells, and a self refresh address control section comprising a self refresh control circuit for inputting a control signal and for outputting a self cycle signal, and

a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

166. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, Fidelix is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '925 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further Fidelix is and/or has been inducing users to use said chips.

167. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, Fidelix is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '925 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

168. Accordingly, on information and belief Fidelix is liable for infringement of the '925 patent.

169. On information and belief, Hynix has been and now is infringing the '925 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality of memory cells, and a self refresh address control section comprising a self refresh control circuit for inputting a control signal and for outputting a self cycle signal, and

a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

170. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, Hynix is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '925 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further Hynix is and/or has been inducing users to use said chips.

171. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, Hynix is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '925 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

172. Accordingly, on information and belief Hynix is liable for infringement of the '925 patent.

173. On information and belief, ISSI has been and now is infringing the '925 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality of memory cells, and a self refresh address control section comprising a self refresh control circuit for inputting a control signal and for outputting a self cycle signal, and

a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

174. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, ISSI is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '925 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further ISSI is and/or has been inducing users to use said chips.

175. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, ISSI is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '925 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

176. Accordingly, on information and belief ISSI is liable for infringement of the '925 patent.

177. On information and belief, Memphis has been and now is infringing the '925 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality of memory cells, and a self refresh address control section comprising a self refresh control circuit for inputting a control signal and for outputting a self cycle signal, and



a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

178. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, Memphis is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '925 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Memphis is and/or has been inducing users to use said chips.

179. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, Memphis is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '925 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

180. Accordingly, on information and belief Memphis is liable for infringement of the '925 patent.

181. On information and belief, Odyssey has been and now is infringing the '925 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality of memory cells, and a self refresh address control section comprising a self refresh control circuit for inputting a control signal and for outputting a self cycle signal, and a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

182. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, Odyssey is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '925 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Odyssey is and/or has been inducing users to use said chips.

183. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, Odyssey is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '925 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

184. Accordingly, on information and belief Odyssey is liable for infringement of the '925 patent.

185. On information and belief, Ravin Electronics has been and now is infringing the '925 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality of memory cells, and a self refresh address control section comprising a self refresh control circuit for inputting a control signal and for outputting a self cycle signal, and a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

186. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, Ravin Electronics is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to

infringe the '925 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Ravin Electronics is and/or has been inducing users to use said chips.

187. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, Ravin Electronics is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '925 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

188. Accordingly, on information and belief Ravin Electronics is liable for infringement of the '925 patent.

189. On information and belief, Tru-Tronics has been and now is infringing the '925 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality of memory cells, and a self refresh address control section comprising a self refresh control circuit for inputting a control signal and for outputting a self cycle signal, and a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

190. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, Tru-Tronics is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '925 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Tru-Tronics is and/or has been inducing users to use said chips.

191. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, Tru-Tronics is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '925 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

192. Accordingly, on information and belief Tru-Tronics is liable for infringement of the '925 patent.

193. On information and belief, X-Press has been and now is infringing the '925 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality of memory cells, and a self refresh address control section comprising a self refresh control circuit for inputting a control signal and for outputting a self cycle signal, and a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

194. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, X-Press is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '925 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further X-Press is and/or has been inducing users to use said chips.

195. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, X-Press is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including

by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '925 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

196. Accordingly, on information and belief X-Press is liable for infringement of the '925 patent.

197. On information and belief, XiTrade has been and now is infringing the '925 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a memory cell array comprising a plurality of memory cells, and a self refresh address control section comprising a self refresh control circuit for inputting a control signal and for outputting a self cycle signal, and a row address buffer for inputting the self cycle signal and for outputting the address signal to said memory cell array based on the self cycle signal as the trigger signal.

198. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, XiTrade is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '925 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further XiTrade is and/or has been inducing users to use said chips.

199. On information and belief, at least since receiving notice of the '925 patent, including at a minimum from this lawsuit, XiTrade is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '925 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

200. Accordingly, on information and belief XiTrade is liable for infringement of the '925 patent.

**COUNT IV**  
**INFRINGEMENT OF U.S. PATENT NO. 6,462,996**

201. United States Patent No. 6,462,996 ("the '996 patent"), entitled "Semiconductor integrated circuit device having internal synchronizing circuit responsive to test mode signal," issued on October 8, 2002.

202. DRAM Technologies is the present assignee of the entire right, title and interest in and to the '996 patent, including all rights to sue for past and present infringement. Accordingly, DRAM Technologies has standing to bring this lawsuit for infringement of the '996 patent.

203. The various claims of the '996 patent cover, inter alia, a semiconductor integrated circuit device, namely a DRAM chip, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

204. On information and belief, America II has been and now is infringing the '996 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

205. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, America II is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '996 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further America II is and/or has been inducing users to use said chips.

206. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, America II is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '996 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

207. Accordingly, on information and belief America II is liable for infringement of the '996 patent.

208. On information and belief, D-Mac has been and now is infringing the '996 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

209. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, D-Mac is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the

‘996 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further D-Mac is and/or has been inducing users to use said chips.

210. On information and belief, at least since receiving notice of the ‘996 patent, including at a minimum from this lawsuit, D-Mac is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the ‘996 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

211. Accordingly, on information and belief D-Mac is liable for infringement of the ‘996 patent.

212. On information and belief, EDX has been and now is infringing the ‘996 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

213. On information and belief, at least since receiving notice of the ‘996 patent, including at a minimum from this lawsuit, EDX is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the ‘996 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further EDX is and/or has been inducing users to use said chips.



214. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, EDX is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '996 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

215. Accordingly, on information and belief EDX is liable for infringement of the '996 patent.

216. On information and belief, ESMT has been and now is infringing the '996 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

217. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, ESMT is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '996 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further ESMT is and/or has been inducing users to use said chips.

218. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, ESMT is and/or has been contributing to the

infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '996 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

219. Accordingly, on information and belief ESMT is liable for infringement of the '996 patent.

220. On information and belief, Etron has been and now is infringing the '996 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

221. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, Etron is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '996 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further Etron is and/or has been inducing users to use said chips.

222. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, Etron is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users,

including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '996 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

223. Accordingly, on information and belief Etron is liable for infringement of the '996 patent.

224. On information and belief, Fidelix has been and now is infringing the '996 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

225. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, Fidelix is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '996 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further Fidelix is and/or has been inducing users to use said chips.

226. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, Fidelix is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing

the same to be especially made or especially adapted for use in an infringement of the '996 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

227. Accordingly, on information and belief Fidelix is liable for infringement of the '996 patent.

228. On information and belief, Hynix has been and now is infringing the '996 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

229. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, Hynix is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '996 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further Hynix is and/or has been inducing users to use said chips.

230. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, Hynix is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of

the '996 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

231. Accordingly, on information and belief Hynix is liable for infringement of the '996 patent.

232. On information and belief, ISSI has been and now is infringing the '996 patent by actions comprising making, using, selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

233. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, ISSI is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips and/or resellers of said DRAM chips, to infringe the '996 patent, including without limitation by selling, offering for sale and/or importing said DRAM chips; and further ISSI is and/or has been inducing users to use said chips.

234. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, ISSI is and/or has been contributing to the infringement of others, including without limitation said manufacturers, resellers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of

the '996 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

235. Accordingly, on information and belief ISSI is liable for infringement of the '996 patent.

236. On information and belief, Memphis has been and now is infringing the '996 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

237. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, Memphis is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '996 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Memphis is and/or has been inducing users to use said chips.

238. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, Memphis is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '996 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

239. Accordingly, on information and belief Memphis is liable for infringement of the '996 patent.

240. On information and belief, Odyssey has been and now is infringing the '996 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

241. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, Odyssey is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '996 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Odyssey is and/or has been inducing users to use said chips.

242. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, Odyssey is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '996 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

243. Accordingly, on information and belief Odyssey is liable for infringement of the '996 patent.

244. On information and belief, Ravin Electronics has been and now is infringing the '996 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

245. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, Ravin Electronics is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '996 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Ravin Electronics is and/or has been inducing users to use said chips.

246. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, Ravin Electronics is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '996 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

247. Accordingly, on information and belief Ravin Electronics is liable for infringement of the '996 patent.

248. On information and belief, Tru-Tronics has been and now is infringing the '996 patent by actions comprising selling, offering for sale and/or importing synchronous



semiconductor memory devices, namely DRAM chips, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

249. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, Tru-Tronics is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '996 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further Tru-Tronics is and/or has been inducing users to use said chips.

250. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, Tru-Tronics is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '996 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

251. Accordingly, on information and belief Tru-Tronics is liable for infringement of the '996 patent.

252. On information and belief, X-Press has been and now is infringing the '996 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge

of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

253. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, X-Press is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '996 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further X-Press is and/or has been inducing users to use said chips.

254. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, X-Press is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '996 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

255. Accordingly, on information and belief X-Press is liable for infringement of the '996 patent.

256. On information and belief, XiTrade has been and now is infringing the '996 patent by actions comprising selling, offering for sale and/or importing synchronous semiconductor memory devices, namely DRAM chips, comprising a test mode setting circuit activating a test mode signal; an internal synchronizing circuit including a clock generator generating an internal clock signal; a phase comparator, and a clock edge adjusting circuit adjusting a beginning edge of said internal clock signal in response to activation of said test mode signal; and an internal circuit operating in synchronization with said internal clock signal.

257. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, XiTrade is and/or has been inducing others, including without limitation manufacturers of apparatuses incorporating said DRAM chips, to infringe the '996 patent, including without limitation by selling and/or offering for sale said DRAM chips; and further XiTrade is and/or has been inducing users to use said chips.

258. On information and belief, at least since receiving notice of the '996 patent, including at a minimum from this lawsuit, XiTrade is and/or has been contributing to the infringement of others, including without limitation said manufacturers and/or users, including by selling, offering to sell and/or importing said DRAM chips, at a minimum knowing the same to be especially made or especially adapted for use in an infringement of the '996 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

259. Accordingly, on information and belief XiTrade is liable for infringement of the '996 patent.

260. As a result of Defendants' infringing conduct, Defendants have damaged DRAM Technologies. Defendants are liable to DRAM Technologies in an amount that adequately compensates DRAM Technologies for their infringement, which, by law, can be no less than a reasonable royalty.

261. DRAM Tech intends to seek discovery on the issue of willfulness, and it reserves the right to seek a willfulness finding relative to pre-suit infringement. Further, to the extent that any Defendant who was previously unaware of the '118, '622, '925 or '996 patent continues to infringe during the pendency of this suit, such infringement would necessarily be objectively reckless, and thus willful.

262. On information and belief, all Defendants have at least had constructive notice of the '118, '622, '925 and '996 patents by operation of law, and DRAM Technologies and any

predecessors-in-interest have complied with any marking requirements of 35 U.S.C. § 287 to the extent required by law.

263. As a consequence of these Defendants' infringement, DRAM Technologies has been irreparably damaged and such damage will continue without the issuance of an injunction from this Court.

**PRAYER FOR RELIEF**

WHEREFORE, DRAM Technologies respectfully requests that this Court enter:

1. A judgment in favor of DRAM Technologies that Defendants have infringed, directly, jointly, and/or indirectly, by way of inducing and/or contributing to the infringement of the '118, '622, '925 and '996 patents.

2. A judgment finding that such infringement has been and/or is willful as noted hereinabove, thus entitling DRAM Tech to enhanced damages under 35 U.S.C. § 284;

3. A permanent injunction enjoining these Defendants, and their officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in active concert therewith from infringement, inducing the infringement of, or contributing to the infringement of the '118, '622, '925 and '996 patents.

4. A judgment and order requiring the Defendants to pay DRAM Technologies its damages, costs, expenses, and prejudgment and post-judgment interest for their respective infringements of the '118, '622, '925 and '996 patents, as provided under 35 U.S.C. § 284;

5. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding to DRAM Technologies its reasonable attorneys' fees; and

6. Any and all other relief to which DRAM Technologies may show itself to be entitled.

7.

**DEMAND FOR JURY TRIAL**

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

February 5, 2010

Respectfully submitted,

DRAM TECHNOLOGIES LLC

By: /s/ Michael L. Collins

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